

Nagase, K. and Sakiguchi, K.
ETHYLENE OXIDE ADDITION REACTIONS TO
LAURYL AMINE. [1962] [16]. 11 ref.
Order from SLA \$1.00 62-14289

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1031-1034.

DESCRIPTORS: *Ethylene oxide, Catalysts, Chemical
reactions, *Amines, Additives, Polymerization.

The addition of ethylene oxide to lauryl amine can be
divided into two reaction types depending on the kind
of catalyst used. One is the acid catalyzed reaction
(A.C. type), and the other is the base catalyzed reac-
tion (B.C. type). When the average number of moles
of ethylene oxide is less than two, both reactions
can be clearly classified into these two types. These
reactions were studied in order to investigate the reac-
tion mechanism by varying the relationship of the
(Chemistry-Physical). TL v. 8, no. 6. (400)

62-14289

I. Nagase, K.
II. Sakiguchi, K.

Office of Technical Services

Nagase [K.] and Sakaguchi [K.].
ADDITION REACTION OF ETHYLENE OXIDE TO
LAURIC ACID. [1962] [18] p. 14 refs.
Order from SLA \$1.60 62-14288

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1035-1040.

DESCRIPTORS: *Ethylene oxide, Additives, Chemical
reactions, *Fatty acids, Catalysts, Laurates

Sodium metal was used as the catalyst in the reaction
of ethylene oxide at atmospheric pressure by the
bubbling method, and under pressure in measuring the
rate of addition. The product analyses were done
after extracting the product with ether and determining
the acid value, saponification value and hydroxy value
of the extract. In both cases the addition curve shows
an inflection point when the average number of moles
v, of ethylene oxide is one. But the products show dif-
(Chemistry--Physical, TT, v. 8, no. 4) (over)

62-14288

I. Nagase, K.
II. Sakaguchi, K.

Office of Technical Services

62-14287

Nagase, K. and Sakaguchi, K.
ADDITION REACTIONS OF ETHYLENE OXIDE
UNDER PRESSURE. [1962] [15]p. 7 refs.
Order from SLA \$1.60

62-14287

I. Nagase, K.
II. Sakaguchi, K.

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 6] p. 1043-1047.

DESCRIPTORS: *Ethylene oxide, Additives, Chemical
reactions, Pressure, Temperature, Catalysts,
Polymerization, Solubility.

Ethylene oxide was added to lauryl alcohol and nonyl
phenol under pressure (gauge pressure 1.5, 5.0 and
10.0 kg/cm²) at temperatures 100°, 125°, 150° and
175°C and catalyst concentration 0.25 to 2.0 mole
percent. The addition reaction curves, the rates and
the distribution of the degree of polymerization were
investigated. The addition curve is a straight line
corresponding to the reaction time in the case of
(Chemistry--Physical, TT, v. 8, no. 3) (over)

Office of Technical Services

Chromatographic Studies of Aminanthraquinone
Type Dispersion Dyes, by Y. Bancho.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
No 6, 1961, pp 1061-1066.
ATS JS-144

Sci-Mat
Feb 69

373,847

62-12405

Fukumoto, Osamu.
ON THE CONTINUOUS METHOD OF HYDROXYL-
AMINE PREPARATION. Studies on the Production of
E-Caprolactam, no. 1. [1961] 7p. 2 refs.
Order from SA \$15.00 SA Code-38

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961, v. 64,
no. 6, p. 1118-1121.

DESCRIPTORS: *Lactams, Production, *Amines.
*Hydroxides, Preparation, Chemical reactions.

(Chemistry--Organic, TT, v. 7, no. 5)

I. Fukumoto, O.
II. Title: On . . .
III. SA Code-38
IV. Seizaburo Aoki (Japan)

Office of Technical Services

Takahashi, Masao.
SOLUTION TEMPERATURE OF VARIOUS MIXED
SOLVENTS TOWARD ACRYLONITRILE POLYMER.
Rept. no. 37 of studies on Acrylic Fiber. [1962] 10p.
20 refs.
Order from SLA \$1.10

62-14965

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 6, p. 1134-1136.

DESCRIPTIONS: Polymers, *Acrylonitriles, Organic
solvents, Mixtures, *Methanes, Nitro radicals, *Forma-
mides, Methyl radicals, Nitriles, Maleic anhydride,
Succinic anhydrides, Pyrrolidinone, Sulfoxides, DNP,
Nitrophenols, Acetones.

Polymer solutions which are stable at normal tempera-
ture are formed by the addition of about 20 vol% of
malononitrile or dimethyl sulfoxide to nitromethane.
Compounds which demonstrate some slight interaction
(Materials--Plastics, TT, v. 9, no. 4) (over)

62-14965

I. Takahashi, M.

Office of Technical Services

Kodama, Hiroshi and Atarashi, Yuzji.
POLYMERIZATION OF PROPYLENE IN THE PRESENCE OF ETHERS AND AMINES WITH TRIETHYLALUMINUM-TITANIUM TRICHLORIDE. [1961] 13p. 18 refs.

Order from SA \$16.00

SA Code-43

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 6, p. 1140-1145.

DESCRIPTORS: *Propenes, Polymerization, Ethers, Amines, Aluminum compounds, Ethyl radicals, Titanium compounds, Chlorides, Catalysts, Catalysis, Chemical reactions, Polymers, Molecular weight

Polymerization of propylene was carried out in n-heptane, in the presence of ether or amine with the aid of a catalyst of the triethylaluminum-titanium trichloride system. The effects of the addition agents upon the (Chemistry-Physical, TT, v. 7, no. 5) (over)

(2-1240)

- I Kodama, H.
- II Atarashi, Y.
- III SA Code-43
- IV Seizaburo Aoki (Japan)

Office of Technical Services

Studies of Addition Reaction of Ethylene Oxide.
Part VII. By-Products in Addition Reaction of
Ethylene Oxide, by K. Nagase.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, 1961,
pp 1199-1203.
NTC-71-15514-07C

Feb 72

Nakada, Ichiro.
THE GROWING OF ANTHRACENE SINGLE
CRYSTALS. [1962] 14p. 7 refs.
Order from SLA \$1.60 62-10686

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 7, p. 1218-1221.

DESCRIPTION: *Anthracenes, *Single crystals.
Crystallization, Scintillation counters.

The growing of single crystals of 2.5 cm diameter
and height, as scintillators for radiation measure-
ment, was attempted. The Bridgman method of grow-
ing spontaneously with a capillary tube was unsuitable
for substances such as anthracene, whose inter-
molecular force is weak and which is markedly ani-
sotropic. By one method, a crystal tube only for seeds,
of about 1 cm diameter, was prepared separately
(Physics--Solid State, TT, v. 8, no. 10) (over)

62-10686

I. Nakada, I.

Hydrolysis of Titanium Sulfate Solution,
by N. Sakai, K. Yoshikawa, M. Suzuki,
S. Kobashi.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol
64, No 4, 1961, pp. 613-18
NTC 69-10683-07B

Sci-Chem
July 69

386,694

Oda, Ryohel and Hayashi, Yoshituki.
SYNTHESES OF SOME HETEROCYCLIC COMPOUNDS
WITH LONG ALKYL SIDE-CHAINS AND THEIR AP-
PLICATIONS AS WATER-REPELLING AGENTS FOR
TEXTILES. [1962] 13p. 7 refs.
Order from SLA \$4.60

62-14966

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 7, p. 1230-1233.

DESCRIPTORS: *Textiles, *Moistureproofing, *Hetero-
cyclic compounds, Synthesis, Alkyl radicals, Molecular
structure.

(Materials--Textiles, TT, v. 9, no. 5)

62-14966

I. Oda, R.
II. Hayashi, Y.

Office of Technical Services

62-10223

Takimoto, Masayoshi.
DETERMINATION OF MELAMINE, AMMELINE,
AMMELIDE, AND CYANURIC ACID BY ION-EX-
CHANGE SEPARATION AND ULTRAVIOLET AB-
SORPTIOMETRY. Rept. 8 of Studies on Separation-
Determination Methods for Cyanamide Derivatives.
[1961] 17p.
Order from SLA \$1.60

62-10223

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 7, p. 1234-1238.

DESCRIPTORS: *Cyanamides, Amides, Cyanuric acid,
Acids, Melamine, Determination, Separation, Ion
exchange, Chromatographic analysis, Ultraviolet
spectroscopy.

Separations and determination of ammeline, ammelide,
and cyanuric acid, which are formed by the hydrolysis
(Chemistry--Analytical, TT, v. 7, no. 9) (over)

1. Takimoto, M.
II. Title: Studies ...

Office of Technical Services

63-12094

Fukumoto, Osamu.

ON THE KINETICS OF BECKMANN'S REARRANGE-
MENT. Rept. 4 of Studies on the Production of
ε-Caprolactam. Oct 62, 12p. 5 refs.
Order from SA \$19.00

SA Code-G511

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 7, p. 1285-1289.

DESCRIPTORS: *Lactams, Production, Sulfuric acid,
Cyclohexanones, Oximes, Ionization, Dehydration.
*Reaction kinetics.

(Chemistry--Physical, TT, v. 9, no. 1)

I. Title: Beckmann's
rearrangement

I. Fukumoto, O.

II. Title: Studies...

III. SA Code-G511

IV. Setzaburo Aoki (Japan)

Office of Technical Services

The Thermal Expansion and Vitrification of Epoxy
Resins Hardened With Acid Anhydrides, by Akio Shimazaki,
11 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXIV,
1961, pp 1291-1294. 9226572
AEC-SC-T-64-2009

Sci-Chem
Jan 65

271,829

Sulfobchlorination of Polypropylene, by
T. Oshika.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
No 7, 1961, pp 1299-1302.

ATB-JS-192

Sci-Chem
Mar 70

403,867

62-34464

Sobue, Hiroshi and Saito, Yoshitami.
POLYMERIZATION OF n-BUTYL VINYL ETHER WITH
THE aid OF ZIEGLER CATALYST. Oct 62, 5p.
Encls.
Circulated from SA 518.00

SA Code: G52-

I. Title: Ziegler catalysts
II. Sobue, H.
III. Saito, Y.
III. SA Code: G52-
IV. ~~_____~~

Journal of Polymer Science (Japan) 1961, v. 64,
no. 1, p. 173-177

INDEXED FOR: *Butyl radicals, *Vinyl radicals,
Encls. Polymerization Catalysts, Aluminum,
Literature

1. Distribution: 100, 100, 100, 100

Office of Technical Services

A Study on the Reducing Reaction of Titanium
Tetrachloride to Titanium Trichloride, by
T. Ishino.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64,
1961, pp 1344-1347.

NTC-71-15651-07B

Feb 72

Nagase, T. and Kozima, L.
PREPARATION OF PERFLUOROCARBOXYLIC ACIDS
BY ELECTROCHEMICAL FLUORINATION ALCOHOLS.
[1962] 10p. (2 figs. 2 tables 11 refs. omitted).
Order from SLA \$1. 10 62-14874

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
[no. 8] p. 1397-1400.

DESCRIPTORS: *Carboxylic acids, Acetic acids,
Propionic acids, Fluorides, Preparation, * electro-
chemistry, *Alcohols, Ethanols, Propanols, Butanols,
*Fluorination.

Relatively high yields of perfluorocarboxylic acids have
been obtained by electrochemical fluorination of alcohols.
About 30 g. of ethyl alcohol, n-propyl alcohol, isopropyl
alcohol, or n-butyl alcohol was dissolved in 1 l. of
anhydrous hydrogen fluoride, and electrolyzed at various
(Chemistry--Organic, TT, v. 9, no. 4) (over)

62-14874

I. Nagase, T.
II. Kozima, L.

Office of Technical Services

Nagase, Shunji.
FLUORINATION OF MALEIC ANHYDRIDE BY
FLUORINE GAS. [1962] 6p. (2 figs. 2 tables
9 Japanese refs. 1 formula omitted) 2 refs.
Order from SLA \$1.10 62-16185

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 8, p. 1400-1403.

DESCRIPTORS: *Maleic anhydride, Fluorination,
*Fluorine, Gases, Jets, Towers (Chemistry).

In the direct fluorination of maleic anhydride with
fluorine by means of an improved jet reactor, per-
fluoropropionyl fluoride was obtained at a fairly high
yield rate through successive operations of the re-
actor. This suggests a new method of perfluoro-
propionyl fluoride production. It became apparent
that the use of said reactor makes maleic anhydride
(Chemistry--Organic, TT, v. 8, no. 9) (over)

62-16185

L. Nagase, S.

Office of Technical Services

62-10684

Takimoto, Masayoshi.
SEPARATION OF MELAM AND MELEM, AND
THEIR SIMPLE DETERMINATION BY THE
SPECTROPHOTOMETRIC METHOD. Rept. no. 9 of
Studies on Separation [and] Determination methods
for Cyanamide Derivatives. [1962] 15p. 11 refs.
Order from SLA \$1.60 62-10684

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 8, p. 1452-1455.

DESCRIPTORS: *Cyanamides, *Melamine, *Melem,
Separation, *Ion exchange, Spectrographic analysis.

(Chemistry--Analytical, TT, v. 8, no. 11)

- I. Title: Melam
- I. Takimoto, M.
- II. Title: Studies...

Office of Technical Services

Takimoto, Masayoshi.
INVESTIGATION OF THE SEPARATION AND DETERMINATION OF COMPOUNDS WHICH FORM BY MELAMINE-FORMING REACTION AND BY HYDROLYSIS OF THEIR HEAT-CONDENSATES (CYANOMELAMINE, GUANYLMELAMINE, CYAMELURIC ACID, ETC.). Rept. no. 10 of Studies on Separation [and] Determination Methods for Cyanamide Derivatives. [1962] 15p. 13 refs.
Order from SLA \$1.60 62-10685

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 8, p. 1456-1460.

DESCRIPTORS: *Cyanamides, *Melamine, Separation, Determination, Hydrolysis, Ion exchange resins, Ultraviolet spectroscopy, Absorption spectra, Chromatographic analysis.

(Chemistry--Analytical, TT, v. 8, no. 9)

62-10685

I. Takimoto, M.
II. Title: Studies ...

Office of Technical Services

Ide, Fumio.

THE MOLECULAR WEIGHT OF POLYMETHYL METHACRYLATE IN CELLULOSE-METHYL METHACRYLATE GRAFT COPOLYMER. Rept. no. 1001 Studies on Vinyl Polymerization. [1967] 15p. 15 refs.

Chem. Abstr. 61: 85, 60

62-10000

Index of Kogyo Kagaku Zasshi (Japan) 1964, v. 67, no. 1, p. 145-146.

DESCRIPTORS: Acrylic resins, Polymers, Molecular weight, Cellulose, Plastics.

The relationship between the degree of polymerization and polymerization conditions was investigated with respect to polymethyl methacrylate which had been isolated by sulfuric acid-hydrolyzing cellulose-methyl methacrylate graft copolymer, which had been obtained by using ceric ammonium salt as (Materials-Plastics, TT, v. 8, no. 9) (over)

62-10000

I. Index of Kogyo Kagaku Zasshi
II. Index of Kogyo Kagaku Zasshi

62-34501

Ishii, Yoshio, Sekiguchi, Jinen, and Hattori, Masaaki.
POLYMERIZATION OF PROPYLENE OXIDE WITH
METAL ALKOXIDES. Rept. 2 of Studies on the
Polymerization of Epoxy-Compounds. Oct 62, 31p.
12 refs.
Order from SA \$30.00 SA Code-GS64

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 8, p. 1497-1501.

DESCRIPTORS: *Epoxides, *Propenes, Oxides, Poly-
merization, Catalysts, Magnesium compounds, Cobalt
compounds, Iron compounds, Aluminum compounds,
Lithium compounds.

(Materials--Plastics, TT, v. 8, no. 12)

- I. Ishii, Y.
- II. Sekiguchi, J.
- III. Hattori, M.
- IV. Title: Studies ...
- V. SA Code-GS64
- VI. Seizaburo Aoki (Japan)

Office of Technical Services

63-12095

Hashimoto, Hidehisa and Ito, Mikio.

A RECORDING MICRO THERMOBALANCE. Rept. 7 of
Study on the Thermal Degradation of Solid. Oct 62, 26p.
7 refs.

Order from SA \$28.00

SA Code-G572

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 9, p. 1515-1518.

DESCRIPTORS: *Laboratory equipment, *Recording
systems, *Torsion balances, Tungsten wire,
Pyrolysis, Solids.

(Engineering--Chemical, TT, v. 9, no. 1)

I. Hashimoto, H.
II. Ito, M.
III. Title: Study ...
IV. SA Code-G572
V. Seizaburo Aoki (Japan)

Office of Technical Services

TT-64-14353

Ioda, T. and others.

RAY DIFFRACTION PROFILES OF MIXTURES OF
VARIOUS TYPES OF ELECTROGRAPHITIZED CAR-

BON. [1963] [13p] [preface omitted] 5 refs

Order from: SLA \$1.60

TT-64-14353

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
no. 9] p. 1523-1527.DESCRIPTORS: *Carbon, Graphite, *Carbon black,
Isotope, X-ray diffraction analysis.

I. Noda, T.

Hybrid--Solid State, TT, v. 11, no. 9)

Office of Technical Services

Morikawa, Kiyoshi and Nozaki, Fumio.
REDUCIBILITY BY H_2 , SOLUBILITY IN DIMETHYL SULFIDE, AND REACTIVITY OF REDUCED CATALYST WITH CO . Pt. 1 of Surface Composition and Chemical Properties of the Supported Nickel Catalysts. Pt. 3 of Study on the Selective Catalytic Action of the Supported Nickel Catalysts. Oct 62, 24p. 10 refs. Order from SA \$24.00 SA Code-435-

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, no. 9, p. 1562-1567.

DESCRIPTORS: *Nickel catalysts; Surface properties; Chemical properties; Hydrogen; Reaction; Hydrogen peroxide; Solubility; Carbon compounds; Monoxide; Chemical reactions.

(Chemistry--Physical, EE, v. 6, no. 12)

62-34466

Morikawa, Kiyoshi and Nozaki, Fumio.
X-RAY ANALYSIS, INFRARED SPECTRUM ANALY-
SIS, AND DIFFERENTIAL THERMAL ANALYSIS.
Pt. 2 of Surface Composition and Chemical Properties of
the Supported Nickel Catalysts; Pt. 4 of Study on the
Selective Catalytic Action of the Supported Nickel
Catalysts. Oct 62, 20p. 12 refs.
Order from SA \$21.00 SA Code-G586

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 9, p. 1568-1573.

DESCRIPTORS: *Nickel catalysts, Surface properties,
Chemical properties, X-ray diffraction analysis,
Infrared spectroscopy, Pyrolysis.

I. Morikawa, K.
II. Nozaki, F.
III. Title: Surface ...
IV. Title: Study ...
V. SA Code-G586
VI. Setzaburo Aoki (Japan)

(Classification: Technical, "E", "C", and "D")

Office of Technical Services

Shigematsu, Hiroshi, Suzuki, Masaji, and Ishii,
Yoshiro.

RATE OF SUCCESSIVE ADDITIONS OF PROPYLENE
OXIDE TO VARIOUS ALCOHOLS. Pt. 4 of [Studies of
the Kinetics on the Ring Opening Addition of Epoxy Com-
pounds to the Active Hydrogen Compound]. [1962] [21]p.
11 refs.

Order from: SLA 52, 60

62-18748

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 9] p. 1585-1588.

DESCRIPTORS: *Propanes, *Epoxides, *Propenes,
Oxides, *Alcohols, Chemical reactions, Reaction
kinetics, Catalysts, Sodium compounds, Hydroxides

The reaction products of active hydrogen compounds and
propylene oxide have several isomers depending on the
cleavage position in the oxiran ring. The hydroxyl
groups of these isomers may be primary or secondary.
(Chemistry--Physical, TI, v. 10, no. 1) (over)

62-18748

I. Shigematsu, H.
II. Suzuki, M.
III. Ishii, Y.
IV. Title: Studies...

Office of Technical Services

Ohki, Y., Ochiai, M., and Komori, S.
THE REACTIONS OF HIGHER ALIPHATIC
ALCOHOLS WITH ETHYLENE OXIDE USING
TERT.-AMINE CATALYSTS. [1963] 14p 3refs
Order from SLA \$1.60 TT-64-10502

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 9] p. 1588-1592. (Abstract available)

DESCRIPTORS: *Surface-active substances, Synthesis
(Chemistry), *Alcohols, *Ethylene oxide, *Catalysts,
*Amines, Bases (Chemistry), Reaction kinetics.

It was found that tertiary amines are effective catalysts
for the reactions of ethylene oxide with higher fatty
alcohols at lower temperatures. The fact that a
maximum exists at about 80°C suggests a difference in
the catalytic mechanism from the case when KOH is
used. Although the more basic amines exhibit greater
catalytic effect, the steric effect of the amine structure
appears to be a more important consideration. (Author)

TT-64-10502

I. Ohki, Y.
II. Ochiai, M.
III. Komori, S.

(Chemistry--Organic,
TT, v. 11, no. 9)
Office of Technical Services

Taniguchi, H., Funakubo, E., and Kishino, H.
SEPARATION CAPACITY OF SILICA-GEL FOR HYDRO
CARBONS. 16p.
Order from CTS or ETC \$1.85 62-26136

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961,
v. 64, no. 9, p. 1620-1623.

DESCRIPTORS: *Hydrocarbons, *Adsorbents,
Silicon compounds, Dioxides.

(Chemistry--Analytical, TT, v. 9, no. 8)

62-26136

I. Taniguchi, H.
II. Funakubo, E.
III. Kishino, H.

Office of Technical Services

PB-

Takamuku, Setsuo and Yahama, Yoshikazu.
ON LIGNIN CARBOHYDRATE COMPLEX ISOLATED
FROM IRRADIATED WOOD POWDER. May 62 [8]p.
(figs. omitted) 11 refs. FPRR Trans. no. 155.
Order from NRCC NRCC C-4405
Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961, v. 64
[no. 9] p. 1662-1664.

DESCRIPTORS: *Lignin, Carbohydrates, *Radiation
effects, Wood, Production, *Wood pulp.

(Materials--Wood, TT, v. 10, no. 3)

63-17539

- I. Takamuku, S.
- II. Yahama, Y.
- III. FPRR Trans. 155
- IV. NRCC C-4405
- V. Forest Products Research
Branch (Canada)
- VI. Bureau of Translations
(Canada)

Office of Technical Services

62-34499

Fukumoto, Osamu.
ON THE IMPURITIES CONTAINED IN E-CAPRO-
LACTAM. Rept. no. 5 of Studies on the Production of
E -Caprolactam. Oct 62, 9p. 5 refs.
Order from SA \$18.00 SA Code-G610

- I. Title: Caprolactams
- I. Fukumoto, O.
- II. Title: Studies ...
- III. SA Code-G610
- IV. Synthesis of E-Caprolactam

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 9, p. 1668-1670.

DESCRIPTORS: *Lactams, Production, Impurities,
Anilines, Ammonium radicals, Acetates, Nitrobenzenes.

(Chemistry--Organic, TT, v. 8, no. 12)

Office of Technical Services

62-34500

Hashimoto, Shizunobu, Furukawa, Isao, and Yanagawa, Tetsunosuke.

SYNTHESIS OF ORGANO-PHOSPHORUS ACID DIALLYL ESTERS AND THE INFLUENCE OF CHEMICAL STRUCTURE ON THE POLYMERIZATION CHARACTERISTICS AND INFLAMMABILITY OF THEIR POLYMERS. Oct. 62, 17p, 12 refs.
Order from SA \$21.00 SA Code-G613

- I. Hashimoto, S.
- II. Furukawa, I.
- III. Yanagawa, I.
- IV. SA Code-G613
- V. Seizaburo Aoki (Japan)

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 9, p. 1682-1686.

Another trans. is available from SLA \$1.60 as 62-18039 [1962] 20p.

DESCRIPTORS: *Phosphorus acids, Allyl radicals, *Esters, Chlorides, Phosphines, Synthesis, Molecular structure, Polymerization, Inflammable materials, Combustion.

(Chemistry--Organic, TT, v. 8, no. 12)

Office of Technical Services

Infrared Spectra of Sulfochlorinated Polypropylene,
by T. Onshika.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, No 10,
1961, pp 1855-1859.
ATS-JS-193

Sci-Chem
Mar 70

403,868

52-34502

Ohshika, Takao.
THE THERMAL DEGRADATION OF POLYPROPYLENE
DERIVATIVES. Rept. 9 of Studies on Polypropylene.
Oct 62, 32p. 10 refs.
Order from SA \$30.00 SA Code-G646

Trans. in manuscript of Kogyo Kagaku Zasshi (Japan)
1961, v. 64, no. 10, p. 1859-1864.

DESCRIPTORS: *Propenes, Polymers, Sulfur com-
pounds, Chlorine compounds, Pyrolysis, Infrared
spectroscopy, Reaction kinetics, Chemical bonds.

- I. Ohshika, T.
- II. Title: Studies ...
- III. SA Code-G646
- IV. Seizaburo Aoki (Japan)

(Chemistry--Physical, TT, v. 8, no. 12)

Office of Technical Services

Studies of the Deposition of Carbon in the
Manufacture of Synthetic Gases from Natural
Gas X Composition of Gaseous Products and
Carbon Deposition on the Partial Oxidation
of Methane, by K. Muraosa, 10pp
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, 1961,
No 11, pp 1939-1942
SLA TT-64-30140

Sci - Eng
May 67

327,400

Shima, K. and Tsutsumi, S.
PHOTOCHEMICAL REACTION OF METHYL FORMATE IN CYCLOHEXANE. Pt. 3 of Studies of Photochemical Reactions. [1962] 5p.
Order from ATS \$6.50

ATS-85P61J

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 11, p. 1945-1948.

DESCRIPTORS: *Photochemical reactions, Methyl radicals, *Formates, *Cyclohexanes.

62-22151

- I. Shima, K.
- II. Tsutsumi, S.
- III. Title: Studies ...
- IV. ATS-85P61J
- V. Associated Technical Services, Inc., East Orange, N. J.

(Chemistry--Organic, TT, v. 8, no. 7)

Office of Technical Services

Narasaki, Toshio.
SOME PROPERTIES OF CATIONIC POLY-SOAP
MIXTURES WITH NON-IONIC SURFACTANTS. [1964]

9p.

Order from SLA \$1.10

63-10315

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64
[no. 11] p. 1955-1957.

DESCRIPTORS: Polymers, *Soaps, Mixtures, Vinyl
radicals, Ethyl radicals, *Pyridines, *Bromocarbons,
Physical properties, Viscosity, Surface tension,
Colloids, Foams, *Surface-active substances,
*Ethylenes.

Some properties of cationic poly-soap mixtures (nitro-
gen atom in poly- α -vinyl- β -ethylpyridine made
quaternary 29.3% by dodecyl bromide, 36.0% by ethyl
bromide) with several non-ionic surfactants (Polyoxy-
(Materials, TT, v. 10, no. 2) (over)

63-10315

I. Narasaki, T.

Office of Technical Services

63-10754

Yamashita, Chiaki; Asami, Akiharu and Kuriyama, Sutezo.

AIR OXIDATION OF SP WASTE SOLUTION. [1962]

12p. (figs. tables omitted) 7 refs.

Order from SLA \$1.60

63-10754

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64, no. 11, p. 2014-2017.

DESCRIPTORS: Air, Oxidation, Industrial production, Chemical reactions, Organic compounds, Lignin, Wood pulp, *Sulfate pulp, *Wastes (Industrial).

The conditions were examined for manufacturing vanillin from the SP waste solution on an industrial scale by using air as an oxidation agent. It was found that it is possible to manufacture vanillin by using air at just about the same yield as when oxygen is used and that, when the SP waste solution is oxidized in the (Engineering--Chemical, TT, v. 10, no. 2) (over)

- I. Title: Vanillin
- I. Yamashita, C.
- II. Asami, A.
- III. Kuriyama, S.

Office of Technical Services

Studies on Application of Spray Dry Process. Part II. Function of Protective Colloids in Powdered Flavor Manufacturing Process, by T. Saka.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, No 11, 1961, pp 1995-1998.
NTC 69-11294-07A

Sci-Chem
July 69

386,989

Studies on Application of Spray Dry Process. Part III. Spray-Drying of Peppermint Oil-Gum Arabic-Water Emulsion, by T. Saka.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol 64, No 11, 1961, pp 1998-2001.

NTC 69-11292-07A

Sci-Chem
July 69

386,988

Takami, Yano.
R₄Sn-TiCl₄ COMPLEX CATALYST FOR ETHYLENE
POLYMERIZATION AND THE POLYMER OBTAINED
BY THE CATALYST, Rept. 2 of Studies on
R₄Sn-TiCl₄ Complex Catalyst for Olefine Polymeriza-
tion. C662 (13p. (figs. omitted) 4 refs.
Order from SA \$18.00 SA Code-G691

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 1, pp. 2049-2052.

DESCRIPTION: *Ethylenes, Polymerization, Molecular
structure, *Complex compounds, *Catalysts, *Titanium
compounds, Chlorides.

(Chemistry-Physical, TT, v. 8, no. 12)

62-34455

- I. Takami, Y.
- II. Title: Studies ...
- III. SA Code-G691
- IV. Seizaburo Aoki (Japan)

Office of Technical Services

62-14643

Nagase, Shunji, Baba, Hajime, and Kojima, Rimpel.
EFFECTS OF WATER ON THE PREPARATION OF
PERFLUOROCARBOXYLIC ACIDS BY ELECTRO-
CHEMICAL FLUORINATION. [1962] 7p. (4 tables
omitted) 10 refs.
Order from SLA \$1.10
Original copy poor quality; available on loan also

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961, v. 64,
no. 12, p. 2124-2126.

DESCRIPTORS: *Electrochemistry, Fluorination,
*Carboxylic acids, *Fluorides, Synthesis, Water,
Chemical reactions.

The purpose was to determine how a trace of water
(less than 1%) in anhydrous liquid hydrogen fluoride
affects the yield, the composition and electric current
efficiency on the preparation of perfluorocarboxylic
acids from ethyl alcohol, n-propyl alcohol, athyl
(Chemistry--Physical, TT, v. 8, no. 9) (over)

I. Nagase, S.
II. Baba, H.
III. Kojima, R.

Office of Technical Services

62-14642

Nagase, Shunji, Baba, Hajime, and Kojima, Rimpel.
PREPARATION OF PERFLUOROCARBOXYLIC ACID
FROM KETONES BY ELECTROCHEMICAL
FLUORINATION. [1962] 8p. (5 tables omitted) 10 refs.
Order from SLA \$1.10 62-14642
Original copy poor quality; available on loan also

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1961, v. 64,
no. 12, p. 2126-2128.

DESCRIPTORS: *Electrochemistry, Fluorination,
*Carboxylic acids, *Fluorides, Synthesis, *Ketones.

The yield of perfluorocarboxylic acid obtained from
ketones by the electrochemical fluorination was
excellent. Trifluoroethanoic acids are obtained from
acetone, acetyl acetone and ethyl acetoacetate. The
mixture of trifluoroethanoic and perfluoropropionic
acid were obtained from methyl ethyl ketone and
diethyl ketone. The mixture of perfluoropropionic
(Chemistry-Physics, TT, v. 8, no. 9) (over)

I. Nagase, S.
II. Baba, H.
III. Kojima, R.

Office of Technical Services

62-54498

Maruta, Senjiro and Suzuki, Yoshitiro.

ANALYSIS OF ALIPHATIC ALDEHYDES. Rept. 5 of I. Maruta, et al.
Studies on Carbonyl Compounds. Oct 62, 15p. 18 refs. II. Suzuki, et al.
Order from SA, \$21.00 SA Code-G*19 III. Title, Studies on
IV. SA Code-G*19
Trans. in manuscript of Kagyo Kagaku Zasshi (Japan) V. Senjiro Maruta, et al. Paper
1961, v. 64, no. 12, p. 2129-2131.

DESCRIPTORS: *Aliphatic compounds, *Aldehydes,
Nitro radicals, Phenols, Hydrazines, Paper chromatography,
Ultraviolet spectroscopy.

(Chemistry--Analytical, ITT, v. 6, no. 12)

Kato, Jiro, Wakamatsu, Hachiro and others.
EFFECTS OF SOLVENTS UPON THE OXO REACTION
OF ACRYLONITRILE. Rept. no. 1 of Studies on (beta)
Cyanopropionaldehyde. [1963] 9p. (figs. tables omitted)
15 refs.
Order from SLA \$1.10

63-16276

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 12, p. 2139-2142.

DESCRIPTORS: *Acrylonitriles, Oxo process,
*Glutamic acid, Solvent action, Synthesis (Chemistry),
Reduction (Chemistry), *Aldehydes, *Cyano radicals.

The effects of the solvents upon the oxo reactions of
acrylonitrile were investigated as the first stage for
the synthesis of glutamic acid from (beta) cyan propion
aldehyde through the oxo reaction of acrylonitrile.
Different from the ordinary olefines, the effect of the
(Chemistry--Organic, TT, v. 10, no. 7) (over)

63-16276

I. Title: β -Cyanopropional-
dehyde

I. Kato, J.

II. Wakamatsu, H.

III. Title: Studies . . .

Office of Technical Services

Kato, Jiro, Wakamatsu, Hachiro and others.
SYNTHESIS OF (BETA) CYANPROPIONALDEHYDE BY
OXO REACTION. Rept. no. 2 of Studies on (Beta)
Cyanpropionaldehyde [1963] 10p. (figs. tables omitted)
16 refs.

Order from SLA \$1.10

63-16277

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64,
no. 12, p. 2142-2145.

DESCRIPTORS: *Acrylonitriles, Oxo process,
*Glutamic acid, Solvent action, Synthesis (Chemistry),
Reduction (Chemistry), *Aldehydes, *Cyano radicals.

It was found that, in the oxo reaction of acrylonitrile,
there is less waste of (beta) cyan propion aldehyde in
connection with the decomposition of cobalt carbonyl
when such solvents as will carry out homomolecular
disproportionation with dicobalt carbonyl like Lewis
(Chemistry--Organic, TT, v. 10, no. 7) (over)

63-16277

I. Title: β -Cyanpropional-
dehyde

I. Kato, J.

II. Wakamatsu, H.

III. Title: Studies . . .

Office of Technical Services

Nagase, S. (Hunji), Baba, H., and Kojima, R.
PREPARATION OF PERFLUORO CARBOXYLIC
ACIDS BY ELECTROCHEMICAL FLUORINATION OF
UNSATURATED COMPOUNDS. [1967] pp. 68 (with
English summary).
Japan. Chem. Soc. Trans. 40: 1021, 1967.

Trans. of Socy. Sci. Eng. (Japan) 1971, 1, 1.

441. FREDET, J. S. • Nitrosochlorophyllin: Acids • Fluorimetric Synthesis, and Photochemical Fluorination. *Annals of the New York Academy of Sciences*, 1969, 167, 1-12.

Polymers easily soluble in many solvents have been obtained from the polymerization of the monomers containing the above-mentioned substituents. Graft polymers of polyvinylcarbazole and polyacrylonitrile have been obtained from polymers containing amino and hydroxy groups, just as from aromatic ketones. Methylacrylate, butylacrylate, and hexamethylenediphenylacrylate, *ibid.*, v. 8, no. 9. (over)

62-161700

I. Name: _____
 II. Date: ____/____/____
 III. Page: ____ of ____

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Order from SA \$15.00 SA Code: C21

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65, no. 1, p. 88-92.

DESCRIPTORS: *Cellophane, *Styrenes, *Vinyl radicals, Copolymerization, Graft polymers, Catalysts, Nitric acid.

(Materials-Plastics, TT, v. 8, pp. 12)

Preparation of Polyamides From Cyanoethylated
Compounds of Bisphenols, by T. Anto, T. Imoto,
et al, 14 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV,
No 1, 1962, pp 132-136.
ATS-60Q71J

Sci-Chem
March 64

252,099

Nakamura, J., Minegishi, J., and Omoto, Y.
PHOTOCHEMICAL CHLORINATION OF CYCLOHEXANE
[1964] 24p
Order from K-H \$14.40

K-H-11949-b

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 2, p. 201-205.

TT-64-12919

- I. Nakamura, J.
- II. Minegishi, J.
- III. Omoto, Y.
- IV. K-H-11949-b
- V. Kresge-Hooker Science
Library Associates,
Detroit, Mich.

(Chemistry--Organic, TT, v. 12, no. 1)

Office of Technical Services

Nakamura, J., Minegishi, J., and Omoto, Y.
FIEDEL-CRAFTS REACTION OF CYCLOHEXYL
CHLORIDE WITH BENZENE. [1964] 12p
Order from K-H \$7.50

K-H-11949-c

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65
[no. 2] p. 2061.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12918

- I. Nakamura, J.
- II. Minegishi, J.
- III. Omoto, Y.
- IV. K-H-11949-c
- V. Kresge-Hooker Science
Library Associates,
Detroit, Mich

Office of Technical Services

Asahara, Shozo and Mitsuhashi, Keiko.
STUDIES ON THE INTERNAL PLASTICIZING
EFFECT OF THE COPOLYMERIZATION OF FATTY
ACID VINYL ESTERS WITH VINYL CHLORIDE.
Pt. 4 of Studies on Fatty Acid Vinyl Esters. [1963]
14p. 11 refs.
Order from SLA \$1.60

63-14716

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 2, p. 289-292.

DESCRIPTORS: *Plasticizers, *Fatty acids, Vinyl
radicals, Esters, *Polyvinyl chloride, *Vinyl
chlorides, *Copolymerization, *Phthalates, Fibers
(Synthetic), Molecular structure.

Several fatty acid vinyl ester-vinyl chloride copoly-
mers were prepared and their internal plasticizing
effects were deduced from their fusion points and
(Materials - Plastics, TT, v. 10, no. 5) (over)

63-14716

I. Asahara, S.
II. Mitsuhashi, K.
III. Title Studies ...

Office of Technical Services

Ito, Yasuo and Kusano, Kazuhito.
SIMPLE DETERMINATION OF ZINC COMPOUND
DUST BY COLORING HALO METHOD. [1963] [11p]
(foreign text included)
Order from S-LA \$1.60

TT-64-10189

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65,
no. 3, p. 318-323.

DESCRIPTORS: *Zinc compounds, Particles, *Colori-
metric analysis, Potassium compounds, Cyanides,
Iron compounds, Ethyl radicals, Anilines, Gels,
Atmospheric pollution, Dusts,

(Chemistry--Analytical, TT, v. 11, no. 5)

TT-64-10189

I. Title: Coloring halo
method

I. Ito, Y.

II. Kusano, K.

Office of Technical Services

Komori, Saburo and Nishio, Takaaki.
RESEARCH FOR FLUOROALKYL PERMANENT WATER
AND OIL-REPELLENT CHEMICALS. [1962] 7p. (figs.
tables formula omitted) 7 refs.
Order from SLA \$1.10

62-18697

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 3, p. 368-370.

DESCRIPTORS: *Carbamates, *Fluorides, *Alkyl
radicals, Cotton textiles, Moistureproofing, *Oils,
Resistance, Textiles.

(Materials--Textiles, TT, v. 10, no. 2)

62-18697

I. Komori, S.
II. Nishio, T.

Office of Technical Services

TT-64-16184

Taniyama, Masakazu, Nagaoka, Takeshi, Takata,
Toshihiro, and Sayama, Kazumori.
PURIFICATION AND ALKALI-CATALYZED POLYMER-
IZATION OF α -PYRROLIDONE. Rept. 1 of studies on
Polypyrrolidone (Nylon-4). [1964] 16p 13refs
Order from SLA \$1.60

TT-64-16184

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 3, p. 415-418.

- I. Taniyama, M.
- II. Nagaoka, T.
- III. Takata, T.
- IV. Sayama, K.
- V. Title: Studies ...

(Chemistry--Organic, TT, v. 12, no. 4)

Office of Technical Services

Taniyama, Masakazu, Nagaoka, Takeshi, Takata,
Toshihiro, and Sayama, Kazunori.

ALKALI CATALYZED POLYMERIZATION OF
-PYRROLIDONE IN THE PRESENCE OF N, N'-
ADIPYL-DIPYRROLIDONE. Rept. 2 of Studies on
Polypyrrolidone (Nylon-4). [1964] 13p 7refs
Order from SLA \$1.60

TT-64-16183

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 3, p. 419-422.

(Chemistry--Organic, TT, v. 12, no. 4)

TT-64-16183

- I. Taniyama, M.
- II. Nagaoka, T.
- III. Takata, T.
- IV. Sayama, K.
- V. Title: Studies ...

Office of Technical Services

Nagaoka, Takeshi, Takata, Toshihiro, Sayama,
Kazumori, and Taniyama, Masakazu.
ALKALI-CATALYZED POLYMERIZATION OF
-PYRROLIDONE IN ORGANIC SOLVENTS. Repts. 3
of Studies on Polypyrrolidone (Nylon-4). [1964] 17p
Brefs
Order from SLA \$1.60

TT-64-16186

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 3, p. 422-426.

(Chemistry--Organic, TT, v. 12, no. 4)

TT-64-16186

- I. Nagaoka, T.
- II. Takata, T.
- III. Sayama, K.
- IV. Taniyama, M.
- V. Title: studies ...

Office of Technical Services

Nagaoka, Takeshi, Takata, Toshihiro, Sayama,
Kazumori, and Taniyama, Masakazu.
THERMAL STABILITY OF POLYPYRROLIDONE AND
THE VISCOSITY OF ITS SOLUTIONS USING CONCEN-
TRATED INORGANIC SALT WATER SOLUTIONS AS
SOLVENTS. Rept. 4 of Studies on Polypyrrolidone
(Nylon-4). [1964] 16p 14refs
Order from SLA \$1.60

TT-64-16187

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 3, p. 427-431.

(Materials--Textiles, TT, v. 12, no. 4)

TT-64-16187

- I. Nagaoka, T.
- II. Takata, T.
- III. Sayama, K.
- IV. Taniyama, M.
- V. Title: Studies ...

Office of Technical Services

Effect of Boron, Titanium and Lead Ions
on the Growth of Synthetic Mica Crystals,
by T. Matsushita.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 65,
1962, pp 501-507.
NTC-71-15068-20B

Feb 72

63-16274

Kato, Jiro, Komatsu, Takaaki and others.
CHEMICAL PROPERTIES OF (BETA)-CYANPROPION
ALDEHYDE. [1963] 14p. (formulas omitted) 17 refs.
Order from SLA \$1.60 63-16274

1. Title: Cyanpropion
aldehyde
- I. Kato, J.
- II. Komatsu, T.

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 4, p. 548-551.

DESCRIPTORS: *Aldehydes, *Cyano radicals,
Chemical properties, Polymers, Polymerization,
Propionic acids, Oxidation.

(Chemistry--Organic, TT, v. 10, no. 5)

Office of Technical Services

Kato, Jiro; Hayashi, Izumi and others.
PREPARATION OF AN AMMONIA AQUEOUS SOLUTION OF HYDROGEN CYANIDE AND ITS UTILIZATION: SYNTHESIS OF GLUTAMIC ACID FROM (BETA) CYAN PROPIONALDEHYDE. Rept. no. 5 of Studies on (Beta) Cyanpropionaldehyde. [1963] 13p. (figs. tables omitted) 15 refs.
Order from SLA \$1.60

63-16275

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65, no. 4, p. 552-556.

DESCRIPTORS: *Acrylonitriles, Oxo process, *Glutamic acid, Solvent action, Synthesis (Chemistry), Reduction (Chemistry), *Aldehydes, *Cyano radicals.

Hydrogen cyanide was synthesized in accordance with the Andrussov method which is ordinarily employed as a method for the industrial synthesis of hydrogen (Chemistry--Organic, TT, v. 10, no. 7) (over)

63-16275

- I. Title: δ -Cyanpropionaldehyde
- I. Kato, J.
- II. Hayashi, I.
- III. Title: Synthesis . . .
- IV. Title: Studies . . .

Office of Technical Services

Nagaoka, Takeshi, Takata, Toshihiro, Sayama,
Kazunori, and Taniyama, Masahazu.
WET-SPINNING AND FIBER PROPERTIES OF POLY-
PYRROLIDONE. Rept. 5 of Studies on Polypyrrolidone
(Nylon-4). [1964] 17p 10 refs
Order from SLA \$1.60

TT-64-16185

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 4, p. 605-609.

(Materials--Textiles, TT, v. 12, no. 4)

TT-64-16185

- I. Nagaoka, T.
- II. Takata, T.
- III. Sayama, K.
- IV. Taniyama, M.
- V. Title: Studies ...

Office of Technical Services

[Tamura] Akio, Arai, Teijiro, and Murata [Jiro].
IONIC POLYMERIZATION OF DIHYDROPYRAN DERIVATIVES. Jan 64
Order from LSA \$10.25

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 4, p. 642.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12327

- I. Tamura, A.
- II. Arai, T.
- III. Murata, J.
- IV. Literature Service Associates,
Bound Brook, N. J.

Office of Technical Services

Shunsuke, Murahashi.
NEW SYNTHETIC POLYMERS. [1964] 28p
Order from K-H \$16.80
K-H-12425-a

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 5, p. 643-648.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12917

- I. Shunsuke, M.
- II. K-H-12425-a
- III. Kresge-Hooker Science
Library Associates,
Detroit, Mich

Office of Technical Services

Okada, Masahiko.
POLYMERIZATION OF 1,3-DIOXOLANE. [1964] 18p.
Order from K-H \$10.80 K-H-12425-c

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 5, p. 691-695.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12923

- I. Okada, M.
- II. K-H-12425-c
- III. Krenge-Hooker Science
Library Associates,
Detroit, Mich.

Office of Technical Services

Fuji, Hiroyasu, Saegusa, Takeo, Furukawa, Junji.
STEREOBLOCK POLYMERIZATION OF ACETALDEHYDE.
HYDE. Jap. 54
Order from USA \$32.00

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 5, p. 695-696.

DESCRIPTORS: *Acetaldehydes, Polymerization,
Stereochemistry

1. English
2. Saegusa, Takeo
3. Furukawa, Junji
4. Acetaldehyde
5. Polymerization
6. Stereochemistry
7. Brook, N. J.

(Chemistry--Organic, TT, v. 11, no. 11)

Office of Technology &...

Saegusa, Takeo, Imai, K., Hirai, Setusuo, and
Furukawa, J.
COPOLYMERIZATION OF TETRAHYDROFURAN AND
3,3-BIS(CHLOROMETHYL) OXACYCLOBUTANE. [1964]
16p

Order from K-H \$9.60

K-H-12425-e

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 5, p. 699-702.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12927

- I. Saegusa, T.
- II. Imai, K.
- III. Hirai, S.
- IV. Furukawa, J.
- V. K-H-12425-e
- VI. Kresge-Hooker Science
Library Associates,
Detroit, Mich.

Office of Technical Services

Okamura, Seizo, Higashimura, Toshinobu, and
Tomikawa, Masaya.

POLYMERIZATION OF TRIOXANE CATALYZED BY
CATIONIC CATALYST. [1964] 20p

Order from K-H \$12.00

K-H-12425-f

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 5, p. 712-716.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12924

- I. Okamura, S.
- II. Higashimura, T.
- III. Tomikawa, M.
- IV. K-H-12425-f
- V. Kresge-Hooker Science
Library Associates,
Detroit, Mich.

Office of Technical Services

R-4197-D

Radiation-Induced Polymerization of Crystalline
Copolymers, by Yomeho Tabata, et al.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV,
1962, pp 737-740.

*JPRS/Diamond Labs

June 64

Takahashi, Toru.
CALCULATION OF THE VAPOR-LIQUID EQUILIB-
RIUM FOR THE AMMONIA-CARBON DIOXIDE GAS-
WATER SYSTEM BY VAN LAAR'S EQUATION. Rept. 2
of Phase Equilibrium Studies on the Ammonia-Carbon
Dioxide Gas-Water System. [1962] 22p. 27 refs.
Order from SLA \$2.60 63-10083

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 6, p. 837-843.

DESCRIPTORS: *Phase studies, *Chemical equilibrium
Ammonia, Carbon dioxide, Water, Carbamates,
Vapors, Liquids, Determination, Activity coefficient.

(Chemistry--Physical, TT, v. 10, no. 9)

63-10083

- I. Title: van Laar equation
- I. Takahashi, T.
- II. Title: Phase ...

Office of Technical Services

TT-63-20245

Ishii, Y., Sekiguchi, S., and Hayakawa, A.
THE MOLAR DISTRIBUTION OF ALCOHOL-ETHYLENE
OXIDE ADDUCTS. [1963] [14p] 11 refs
Order from SLA \$1.60 TT-63-20245

- I. Title: Adducts
- I. Ishii, Y.
- II. Sekiguchi, S.
- III. Hayakawa, A.

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
p. 1041-1044. (Abstract available)

DESCRIPTORS: *Surface-active substances, *Alcohols,
*Ethylene oxide, Gas chromatography, Catalysts,
Sodium

The molar distribution, which governs the nature of
nondonic surfactants (surface emulsifiers), was studied,
using gas chromatography, for the ethylene oxide ad-
ducts of eight $C_1 \sim C_4$ alcohols, prepared at 100° and
130°C using metallic sodium as a catalyst. From these
experimental results the distribution constants c of
Weibull and Nycauder were obtained, and it was found
that the main factors governing the c -value are the
(Chemistry--Organic, TT, v. 11, no. 2) (over)

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NCH-200 991

Field 7A

Mizorogi, T.; Nakayama, M.; Ando, Y.; Furumi, M.
BATCH SYNTHESIS OF ACETIC ACID IN AN AUTOCLAVE
UNDER HIGH PRESSURE FROM CARBON MONOXIDE
AND METHANOL WITH COBALT ACETATE AND
POTASSIUM IODIDE AS CATALYST. Rept. no. 1 of
Studies on the Reaction of Methanol with Carbon Monoxide
with Metal Carbonyl Catalysts. 23 Apr 65, 16p
(figs omitted) 5 refs. SA-KKZ-65-7-1.
Order from SA: \$25.00 as SA-KKZ-65-7-1

Trans. of Kogyo Kagaku Zasshi (Japan) v65 n7 p1049-54
1962.

I. Title: Studies ...
II. Seizaburo Aoki,
Fujisawa (Japan)

NCH-200 990

Field 7A

Misorogi, T.; Nakayama, N.; Furumi, S.
MEASUREMENT OF THE REACTION RATE OF ACETIC
ACID SYNTHESIS UNDER HIGH PRESSURE FROM CARBON
MONOXIDE AND METHANOL WITH COBALT ACETATE
AND POTASSIUM IODIDE AS CATALYST. Rept. no. 2
of Studies on the Reaction of Methanol and Carbon Monoxide
with the Metal Carbonyl Catalysts. 23 Apr 66, 24p, 3 refs.
SA-KKZ-65-7-2.
Order from SA: \$25.00 as SA-KKG-65-7-2

Trans. of Kogyo Kagaku Zasshi (Japan) v65 n7 p1054-8 1962.

I. Title: Studies ...
II. Seizaburo Aoki,
Fujisawa (Japan)

Saotome, K.
SYNTHESIS OF ϵ -CAPROLACTAM FROM
1,1,1,5-TETRACHLOROPENTANE [1963] 6p.
Order from ATS \$10.50
ATS-85066J

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 7, p. 1059-1061.

DESCRIPTORS: Lactams, Synthesis, Chlorides,
Pentanes.

(Engineering--Chemical, TT, v. 9, no. 9)

63-12813

- I. Title: Caprolactam
- I. Saotome, K.
- II. ATS-85066J
- III. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

Production of Cobalt Trifluoride, by Nobuatsu Watanabe,
11 pp.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV,
1962, pp 1168-1170, 9222644

AEC-UCRL-Tr-1043(L)

Sci-Mar & Met
Jun 64

260,942

63-16423

Fukui, Kenichi; Yoneda, Shigeo and others.
SYNTHESES OF ORGANIC FLUORINE COMPOUNDS
BY THE USE OF POTASSIUM FLUORIDE. Rept.
no. 8 of Studies on Organic Synthesis Reactions Using
Inorganic Salts. [1963] 13p. 32 refs.
Order from SLA \$1.60 63-16423

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 8, p. 1179-1182.

DESCRIPTORS: *Fluorides, *Potassium compounds,
*Amides, *Glycols, Alkyl radicals, Esters, Solvents,
Butanes, Benzyl radicals, Acetates, Ethyl radicals,
Synthesis (Chemistry).

In the method of synthesizing organic fluorine com-
pounds by the reaction between organic halogen com-
pounds and potassium fluoride, the effects of glycols
and acid amides as solvents of the reaction were com-
pared, and in particular, the relationship between the
(Chemistry--Organic, TT, v. 10, no. 7) (over)

I. Fukui, K.
II. Yoneda, S.
III. Title: Studies....

Office of Technical Services

Kageyama, Ikuzo, Katsushima, Atsuo and others.
RESEARCH FOR OIL AND WATER REPELLENTS.
[1962] 13p. (figs. tables refs. omitted) 1 ref.
Order from SLA \$1.60

62-20485

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65,
no. 8 [p. 1207-1210].

DESCRIPTORS: Scientific research, Oils, Water, Textiles, *Protective treatments, *Moisture proofing, Fluorides, Polymers, Chlorides, Coatings, Alkyl radicals, Molecular structure

A series of compounds were synthesized employing $F(CF_2)_n-$, $H(CF_2)_n-$, and $Cl(CF_2CFCI)_mCF_2$ as polyfluoroalkyl radicals (hereinafter will be called Rf) and by combining them with various polar groups. Oil and water repellence of cotton gauze which was coated by proper means with these compounds were measured. The repellency of these compounds were compared re-
(Materials--Textiles, TT, v. 10, no. 2) (over)

62-20485

I. Kageyama, I.
II. Katsushima, A.

ATC-C/1271J

Office of Technical Services

Reaction of Metallic Tungsten and Fluorine Gas,
by Marae Iwasaki, Taneaki Yahata, et al, 15 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV,
1962, pp 1165-1167. 9223533
AEC-UGRL-Tr-1044(L)

Sci-Mat & Met
Sep 64

265,862

Research on the Transition of Polytetrafluoro-Ethylene at
1300°C, by T. Satokawa, S. Kozumi, 6 pp.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV, 1962,
pp 1211-1213. 9226327
AEC-SC-T-64-2008

Sci-Chem
Jan 65

272,456

Tagawa, K., Iimo, S., and Ohta, H.
THE FRACTIONATION OF NONIONIC SURFACTANTS
BY MOLECULAR DISTILLATION. Pt 1 of Molecular
Distillation and Properties of Nonionic Surfactants.
[1963] 20p 7refs
Order from SLA \$1.60

63-20244

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
p. 1260-1265.

DESCRIPTORS: *Distillation, *Surface-active sub-
stances, Ethylene oxide, Molecules, Distilling plants,
Statistical distributions, Stearic acids, Centrifuges.

The ethylene oxide adducts of four different compounds,
i.e. the adduct of nonyl-phenol containing an average of
7.5 moles ethylene oxide, the adduct of octylphenyl,
with an average of 10 moles, the adduct of oleyl alcohol
with an average of 7 moles and the stearic acid adduct
(Engineering-Chemical, TT, v. 10, no. 12) (over)

63-20244

I. Tagawa, K.
II. Iimo, S.
III. Ohta, H.
IV. Title: Molecular . . .

Office of Technical Service

Preparations and Electrical Conductivities of
Polyvinylanthracene and of its Molecular Complexes,
by H. Inoue.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol 65, No 8,
1962, pp 1286-1290.

NTC-71-15513-07D

Feb 72 - 1-498 - 11p

Feb 72

Koyanagi, S.
TELOMERIZATION OF VINYL CHLORIDE IN
CARBON TETRACHLORIDE. [1964] 10p
Order from K-H \$6.00 K-H-12641

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
p. 1388-1390.

(Chemistry--Organic, TT, v. 12, no. 1)

TT-64-12916

- I. Koyanagi, S
- II. K-H-12641
- III. Kresge-Hooker Science
Library Associates,
Detroit, Mich

Office of Technical Services

Funatsu, Minoru, Ineda, Masami, and Kita, Hisahiro.
THE CATALYTIC PROPERTIES OF TERTIARY
AMINES IN THE FORMATION OF POLYURETHANE.
[1963] [10p] 16refs
Order from SLA \$1.60

63-20062

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 9, p. 1426-1430.

DESCRIPTORS: *Isocyanate plastics, *Amines,
*Catalysts, Catalysis, Glycols, Ethylenes, Chemical
analysis,

The catalytic properties of various tertiary amines in
the formation of polyurethane are discussed from the
point of view of the catalytic constant derived from
the reaction rate. For the formation of polyurethane,
toluene diisocyanate was allowed to react with di-
ethylene glycol, propylene glycol, and polypropylene
(Materials--Plastics, TT, v. 10, no. 11) (over)

63-20062

I. Funatsu, M.
II. Ineda, M.
III. Kita, H.

Office of Technical Services

Usami [Shoji] and Taketomi, Noboru.
COMPARISON OF MOLASSES AND GLUCOSE MEDIA
FOR CITRIC ACID FERMENTATION. [1963] [10p]

6refs

Order from SLA \$1.10

63-18870

63-18870

- I. Title: Molasses
- I. Usami, S.
- II. Taketomi, N.

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 10, p. 1603-1605.

DESCRIPTORS: *Glucose, *Citric acids, Molds, *Fer-
mentation, Ash, *Culture media, Potassium, Iron

A study was made of acid formation in citric acid fer-
mentation using *Asp. niger* in molasses (Taiwan
molasses) and glucose media. In molasses medium,
the consumption of oxygen in the early stage of the cul-
tivation is fairly bigger and the starting time of acid
formation is earlier than those in glucose medium due
to the abundant nourishment in the medium. But the
amount of citric acid formed is very low and oxalic
(Biological Sciences--Biochemistry, TT, v. 10, no. 11)
(over)

Office of Technical Services

Fuel Cells Using Organic Redox Compounds, by
Jun Mizuguchi, Shuichi Suzuki.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol 65, No 10,
1962, pp 1606-1608.
Tr No 56, Oct 1969
AIR/AFCL/69-0425

Sci/Chem
Jan 70

400,107

The Correlation Between the Molecular
Structure of Polyvinyl Chloride and Its
Combustion Products, by Sugio Otani.
JAPANESE, per, Kogyo Kagaku Zasshi, Vol
65, No 10, pp 1617-1622.
NASA TT F-12,029

Sci-Chem

Mar 69

377,553

Inoue, H., Hayashi, S. and others.
SYNTHESIS OF ELECTRICALLY CONDUCTIVE
CHELATE POLYMERS. [1963] 9p.
Order from ATS \$13.25

ATS-020671

AGC-SC-L-T-503

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 10, p. 1622-1626.

DESCRIPTORS: *Polymers, *Chelate compounds,
Synthesis, Electrical conductance.

(Chemistry--Organic, TT, v. 9, no. 9)

63-12829

- I. Inoue, H.
- II. Hayashi, S.
- III. ATS-020671
- IV. Associated Technical
Services, Inc., 1400
Orange, N. J.

ATC JT-1022

Office of Technical Services

Radiation-Induced Copolymerization of Tetrafluoroethylene and Propylene at Low Temperature, by Yomeho Tabata, et al.

JAPANESE, per, Kogyo Kagaku Zasshi, Vol. LXV, 1962, pp 1526-1529.

*JPRS/Diamond Lab

June 64

Saito, Hisahiko; Sugihara, Makoto, and Saito, Minoru.

FORMATION OF FERRITE MICROPOWDERS OF SPINEL TYPE. Studies on the Formation of Ferrites from Solutions, I. [1965] 16p. 14 refs.
Order from SLA \$1.60

63-14499

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65, p. 1748-1753.

DESCRIPTORS: *Ferrites, Powders, Solutions, Reaction kinetics, Synthesis (Chemistry), Physical chemistry, Hydrogen ion concentration.

A method is given for forming numerous ferrite micro-powders of spinel type that were formerly difficult to obtain in the temperature range of 50 ~ 600°C to approximately 1000°C. It was found that the concentration of excess alkali plays an important role in the formation (Chemistry--Physical, TT, v. 10, no. 11) (over)

63-14499

I. Saito, H.
II. Sugihara, M.
III. Saito, M.
IV. Title: Studies . . .

Office of Technical Service

Synthesis of Sodium and Potassium Titanates of
Fibrous Form by Hydrothermal Reaction, by
Fumio MIYU, Minoru KIMURA, 19 pp.
JAPANESE, per, Kagaku Kagaku Zasshi, Vol 65,
1962, pp 1775-1779. F91127986
AEC SC-T-67-0933

336,986

Sci - Materials
Sep 67

Properties of Sodium Aluminate Solutions, by J.
Shimisato,
JAPANESE, per, Kogyo Kagaku Zasshi, Vol LXV, No 11,
1962, pp 1779-1782.
ATS 54R79J

Sept 66

309,075

Yamaki, Kiyoshi.

INTERACTION BETWEEN IONIC DYESTUFFS OF
OPPOSITE ELECTRIC CHARGES. [1963] 10p
(figs. tables omitted) 6refs
Order from SLA \$1.10

63-18514

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962,
v. 65 [no. 11] p. 1861-1865.

DESCRIPTORS: *Dyes, *Chemical reactions, Ions,
*Methylene blue, Methanes, Complex compounds,
Vinyl chlorides, Surface-active substances, Surface
tension, Absorption spectrum, Chemical bonds,
Fibers (Synthetic).

The aqueous solutions of ionic dyestuffs of opposite
electric charges, orange II (anion and methylene blue
(cation), were mixed. To examine the interaction
which then takes place between these dyestuffs, the
(Chemistry--Organic, TT, v. 10, no. 11) (over)

63-18514

1. Title- Orange II
I. Yamaki, K.

Office of Technical Services

Hirooka, M. Yuasa, Yukio, and Fukui, Kenichi.
PROPERTIES AND BEHAVIOR OF ACTIVE BODY IN
ETHYLENE-POLYMERIZATION WITH VANADIUM (V)
OXYCHLORIDE-ALUMINUM CATALYZER. Pt. 3 of
High Polymerization of Olefins with Lewis-Acid-Metal-
[lic] Catalyst. [1963] 16p 8refs
Order from SLA \$1.60

63-18858

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65,
no. 11, p. 1865-1868.

DESCRIPTORS: *Polyethylene plastics, Preparation,
*Ethylenes, *Polymerization, *Vanadium catalysts,
Vanadium compounds, *Oxychlorides, *Aluminum, Re-
action kinetics, Complex compounds.

An ethylene polymerization was conducted at a constant
pressure in the presence of vanadium (V)-oxychloride-
aluminum as catalyst and the properties of the active
(Chemistry--Physical, TT. v. 10, no. 11) (over)

63-18858

- I. Hirooka, M.
- II. Yuasa, Y.
- III. Fukui, K.
- IV. Title: High ...

Office of Technical Services

63-18857

Hirooka, M. and Fukui, Kenichi.

AN EXAMINATION OF THE POLYMERIZATION
MECHANISM OF ETHYLENE BY CATALYST VANA-
DIUM(V)-OXYCHLORIDE ALUMINUM. Pt. 4 of High
Polymerization of Olefins with Lewis Acid-Metallic
Catalyst. [1963] 28p (refs omitted) 7 refs
Order from SLA \$2.60

63-18857

- I. Hirooka, M.
- II. Fukui, K.
- III. Title: High ...

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65,
no. 11, p. 1869-1874.

DESCRIPTORS: *Polyethylene plastics, Preparation,
*Ethylenes, *Polymerization, *Vanadium catalysts,
Vanadium compounds, *Oxychlorides, *Aluminum, Re-
action kinetics, Complex compounds.

The characteristics of the polymerization of ethylene
with the use of the catalyst vanadium(V) oxychloride-
aluminum and the behavior of the catalyst were studied
and an examination was made of the characteristics of
(Chemistry--Physical, TT, v. 10, no. 10) (over)

Office of Technical Services

Bansho, Yoshie; Suzuki, Shigeru and others.
RELATIONSHIP OF STRUCTURE TO CRYSTALLINE
TRANSFORMATION GROWTH IN MIXED PHTHALO-
CYANINE PIGMENTS. PT. 3 of Phthalocyanine Organic
Pigment Study. [1963] 10p. 2 refs.
Order from SLA \$1.10

63-16644

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65,
no. 12, p. 2005-2009.

DESCRIPTORS: *Phthalocyanines, *Pigments, *Copper
compounds, *Crystallization, *Transformations,
Crystal structure, Cobalt compounds, Iron compounds,
Titanium compounds, Chlorides.

Crystals of metastable copper phthalocyanine undergo
crystalline transformation in an aromatic solvent and
grow into stable elongated needle crystals. In order to
improve this property, mixed pigments were prepared
(Physics--Solid State, TT, v. 10, no. 7) (over)

63-16644

- I. Bansho, Y.
- II. Suzuki, S.
- III. Title: Phthalocyanine...

Office of Technical Services

Banaho, Yoshie, Sekiguchi, Tatsuo, and Suzuki,
Shigeru.

SYNTHESIS OF COPPER PHTHALOCYANINE SULFATE AND ITS PROPERTIES. Rept. 5 of Studies of Phthalocyanine Organic Pigments. [1963] [17p] 8 refs
Order from SLA \$1.60

63-18741

Trans. of Kogyo Kagaku Zasshi (Japan) [1962] v. 65, no. 12, p. 2015-2017.

DESCRIPTORS: *Dyes, *Organic pigments, *Phthalocyanines, Copper compounds, Sulfates, Metalorganic compounds, Synthesis (Chemistry), Chemical properties, Physical properties, Molecular structure, X-ray diffraction analysis, Infrared spectroscopy

When copper phthalocyanine reacts with undiluted sulfuric acid in suitable organic solvents the sulfate is separated. The sulfate was separated in pure form by removing the sulfuric acid attached to its crystals. In (Chemistry--Organic, TT, v. 10, no. 11) (over)

63-18741

I. Title: Copper phthalocyanine sulfate

I. Banaho, Y.

II. Sekiguchi, T.

III. Suzuki, S.

IV. Title: Studies...

Office of Technical Services